

**WILDERNESS RANCH OWNERS ASSOCIATION INC. (PWS 4080055)
SOURCE WATER ASSESSMENT FINAL REPORT**

March 1, 2005



**State of Idaho
Department of Environmental Quality**

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area and sensitivity factors associated with the surface water intake.

This report, *Source Water Assessment for Wilderness Ranch Owners Association Inc., Idaho*, describes the public water system (PWS), the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The Wilderness Ranch Owners Association Inc. (PWS # 4080055) is a community drinking water system located in Boise County (Figure 1). The system consists of two wells and a surface water intake, which supplies approximately 500 people through 227 connections. At the time this report was written, surface water was expected to be used approximately 50% of the time. The wells would be used primarily during the winter and when Mores Creek was turbid. This report only assesses the surface water intake, as the wells were assessed in a report titled “Wilderness Ranch 1 Through 5 (PWS 4080055) Source Water Assessment Final Report,” and can be obtained from DEQ upon request.

Final surface intake susceptibility scores are derived from heavily weighting potential contaminant inventory/land use scores and adding them with system construction scores. Therefore, a low rating in one category coupled with a higher rating in the other category results in a final rating of low, moderate, or high susceptibility. Potential contaminants are divided into four categories: IOC (i.e., nitrates, arsenic), VOC (i.e., petroleum products), SOC (i.e., pesticides), and microbial contaminants (i.e., bacteria). As a drinking water source can be subject to various contamination settings, separate scores are given for each type of contaminant.

In terms of total susceptibility, the surface intake’s potential to be subject to contamination rated automatically high for IOC, VOC, SOC, and for microbial bacteria. System construction rated moderate and potential contaminant land use scores rated moderate for IOC, VOC, SOC, and microbial bacteria. If not for the automatically high rating, the surface intake would have rated moderate for all four potential contaminant categories.

The system has been soundly engineered, constructed with state-of-the-art facilities, and sized to meet future needs. However, the scoring of this assessment is based heavily on the land use within the Mores Creek drainage system despite the system’s ability to treat any contaminated water it may receive.

For the assessment, a review of laboratory tests was conducted using the State Drinking Water Information System (SDWIS). According to SDWIS, no SOC, VOC, or microbial bacteria have been detected in the wells’ water. The IOC sodium, fluoride, nitrate, beryllium, mercury, and arsenic have been detected in tested water. Concentrations of each IOC have been significantly below maximum contaminant levels (MCLs) except for arsenic. Arsenic has been detected in concentrations between 4 parts per billion (ppb) and 8 ppb, which is approaching the MCL of 10 ppb. The new

water treatment plant is capable of addressing arsenic issues if they arise. In addition, the surface intake's delineation intersects a priority area for the IOC fluoride.

To address potential arsenic issues, a coagulation addition has been added to the pall membrane filtration plant, through which all water destined to the distribution system passes.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new drinking water sources should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

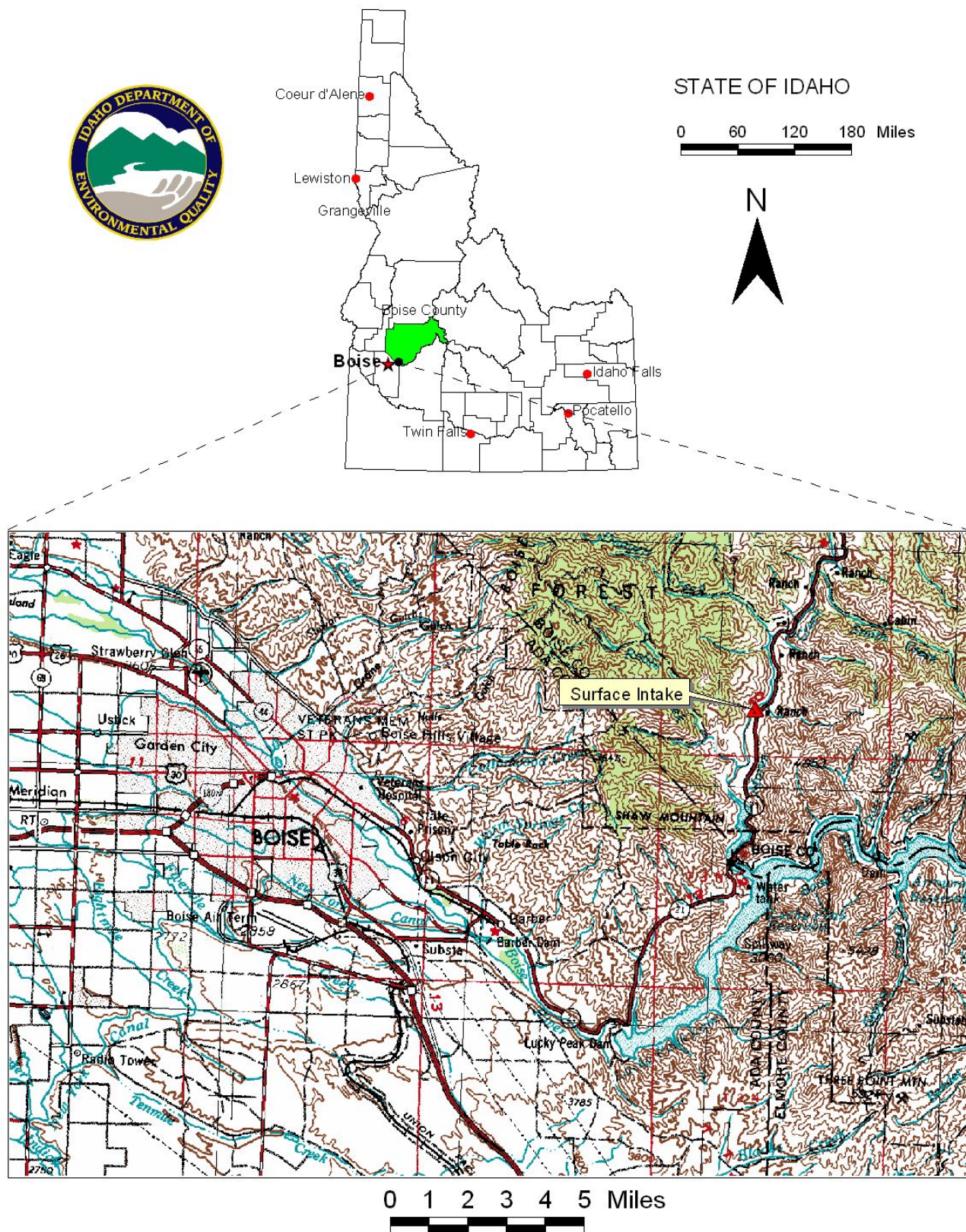
An effective drinking water protection program is tailored to the particular local drinking water protection area. A community with a fully developed source water protection program will incorporate many strategies. For the Wilderness Ranch Owners Association Inc., drinking water protection activities should first focus on correcting any deficiencies outlined in the sanitary survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system's components and its capacity). As land uses within most of the source water assessment areas are outside the direct jurisdiction of the Wilderness Ranch Owners Association Inc., collaboration and partnerships with state and local agencies and industry groups should be established and are critical to success. Educating water users about source water will further assist the system in its monitoring and protection efforts.

Due to the time involved with the movement of ground water and surface water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan. Public education topics could include household hazardous waste disposal methods and the importance of water conservation. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA.

Drinking water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Boise County Soil Conservation and Water District, and the Natural Resources Conservation Service.

A community must incorporate a variety of strategies in order to develop a comprehensive drinking water protection plan, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (i.e. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Boise Regional Office of the Idaho Department of Environmental Quality or the Idaho Rural Water Association.

FIGURE 1 Site Vicinity Map of Wilderness Ranch Owners Association Inc.



SOURCE WATER ASSESSMENT FOR WILDERNESS RANCH OWNERS ASSOCIATION INC., IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this assessment means.** Maps showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are included. The list of significant potential contaminant source categories and their rankings used to develop the assessment also is included.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. EPA to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the drinking water sources, and aquifer characteristics. All assessments for sources active prior to 1999 were completed by May of 2003. Source water assessments for sources activated post-1999 are being developed on a case-by-case basis.

The resources and time available to accomplish assessments are limited. An in-depth, site-specific investigation of each significant potential source of contamination is not possible. **Therefore, this assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of the assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. DEQ recognizes that pollution prevention activities generally require less time and money to implement than treatment of a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a drinking water protection program should be determined by the local community based on its own needs and limitations. Wellhead or drinking water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The Wilderness Ranch Owners Association Inc. (PWS # 4080055) is a community drinking water system located in Boise County (Figure 1). The system consists of three wells and a surface water intake, which supplies approximately 525 people through 218 connections. At the time this report was written, surface water was expected to be used approximately 50% of the time. The wells would be used primarily during the winter and when Mores Creek was turbid. This report only assesses the surface water intake, as the wells were assessed in a report titled "Wilderness Ranch 1 Through 5

(PWS 4080055) Source Water Assessment Final Report,” and can be obtained from DEQ upon request.

According to SDWIS, no SOCs, VOCs, or microbial bacteria have been detected in the wells’ water. The IOCs sodium, fluoride, nitrate, beryllium, mercury, and arsenic have been detected in tested water. Concentrations of each IOC have been significantly below MCLs except for arsenic. Arsenic has been detected in concentrations between 4 ppb and 8 ppb, which is approaching the MCL of 10 ppb. In addition, the surface intake’s delineation intersects a priority area for the IOC fluoride.

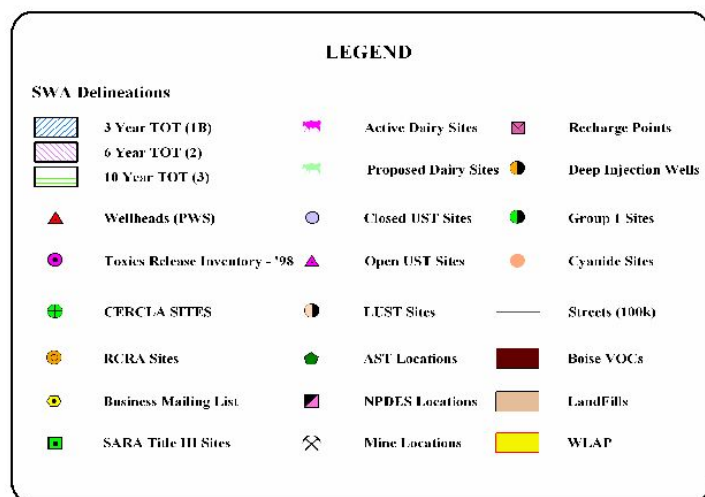
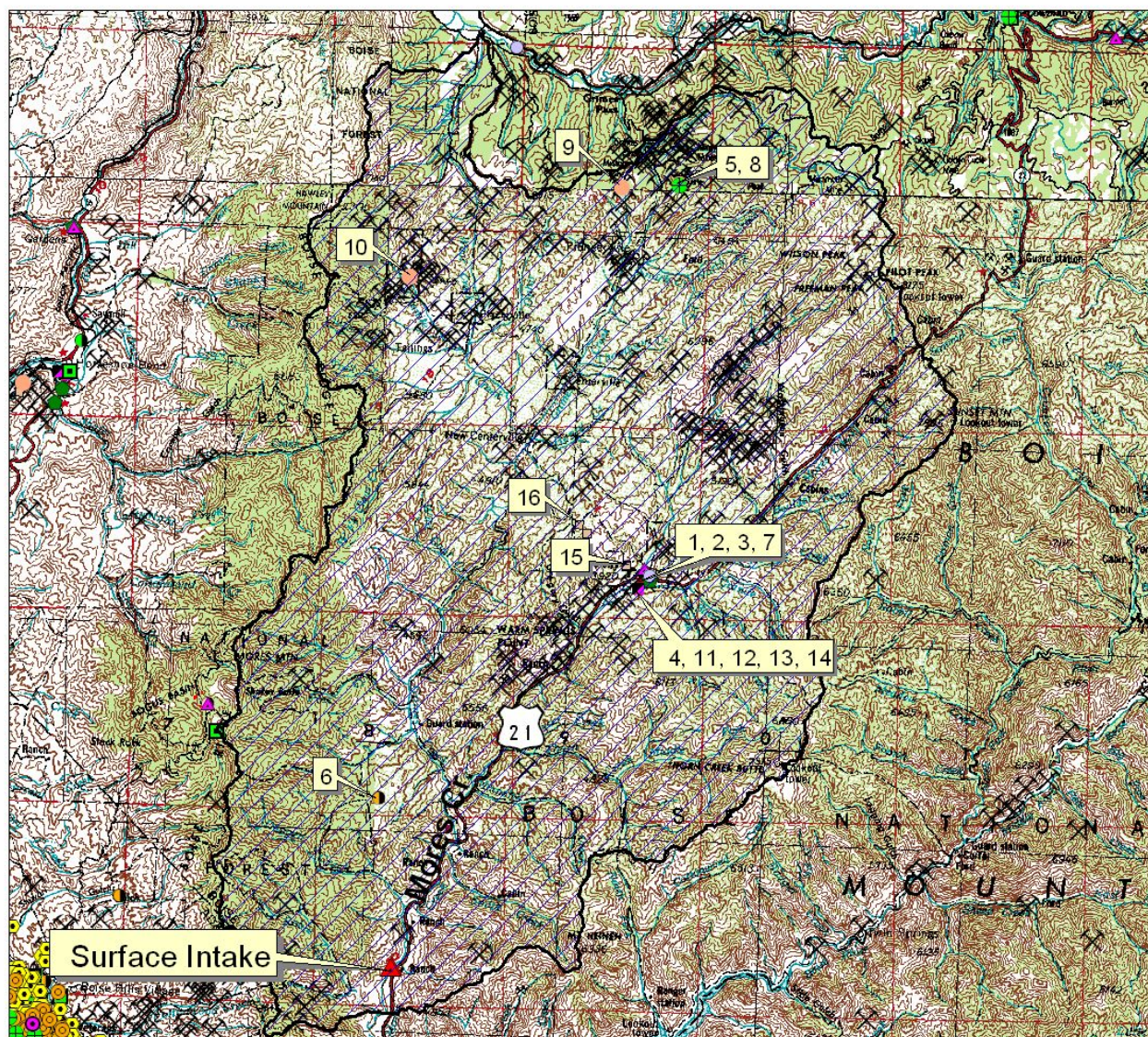
To address potential arsenic issues, a coagulation addition has been added to the pall membrane filtration plant, through which all water destined to the distribution system passes.

Defining the Zones of Contribution- Delineation

To protect surface water systems from potential contaminants, the EPA required that the entire drainage basin be delineated upstream from the intake to the hydrologic boundary of the drainage basin (U.S. EPA, 1997b). The EPA recognized that an intake on a large water body could have an extensive drainage basin. Therefore, the EPA recommended that large drainage basins be segmented into smaller areas for the purpose of implementing a cost-effective potential contaminant inventory and susceptibility analysis. The delineation process established the physical area around an intake that became the focal point of the assessment. For surface water systems located in small watersheds, the boundaries of the zone of contribution were followed to determine the source water area. This method resulted in the entire drainage basin for the surface water body being captured.

The delineated source water assessment area for the Wilderness Ranch Owners Association Inc. can best be described as an elliptical area extending from the intake on Mores Creek to the watershed boundaries on all sides of the creek. The actual data used by DEQ in determining the source water assessment delineation area are available upon request.

Figure 2. Wilderness Ranch Delineation Map and Potential Contaminant Source Locations



0 2 4 6 8 10 Miles



PWS# 4080055
Surface Intake

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

Land use within the area surrounding the Wilderness Ranch surface water intake is predominately forested woodland; however most of the urban activities occur in close proximity to surface water. In addition, there has been much mining and logging within the drainage.

It is important to understand that a release may never occur from a potential source of contamination provided they are using best management practices. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, including educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A two-phased contaminant inventory of the study area was conducted in February and March 2005. The first phase involved identifying and documenting potential contaminant sources within the Wilderness Ranch Owners Association Inc. source water assessment area through the use of computer databases and Geographic Information System (GIS) maps developed by DEQ. The second, or enhanced, phase of the contaminant inventory involved contacting the operator to identify and add any additional potential sources in the delineated areas. A map with the intake location, delineated area, and potential contaminant sources is provided with this report (Figure 2).

Table 1. , Wilderness Ranch Owners Association Inc. Potential Contaminant Inventory

Site #	Source Description ¹	TOT Zone ² (years)	Source of Information	Potential Contaminants ³
1	LUST site, Site Cleanup Completed , Impact: Unknown	3 YR	Database Search	VOC, SOC
2	UST site, Federal Non-Military , Impact: Open	3 YR	Database Search	VOC, SOC
3	UST site, Gas Station , Impact: Closed	3 YR	Database Search	VOC, SOC
4	NPDES site, Municipal discharge	3 YR	Database Search	IOC, SOC, Microbials
5	CERCLA site, Comeback Mine :Permit Holder	3 YR	Database Search	IOC, VOC, SOC
6	Deep Injection Well	3 YR	Database Search	IOC, SOC
7	AST, Diesel/gas	3 YR	Database Search	VOC, SOC
8	Cyanide Site	3 YR	Database Search	IOC
9	Cyanide Site	3 YR	Database Search	IOC
10	Cyanide Site	3 YR	Database Search	IOC
11	WLAP Site	3 YR	Database Search	IOC, SOC, Microbials
12	WLAP Site	3 YR	Database Search	IOC, SOC, Microbials
13	WLAP Site	3 YR	Database Search	IOC, SOC, Microbials
14	WLAP Site	3 YR	Database Search	IOC, SOC, Microbials
15	Landfill, Municipal, Closed	3 YR	Database Search	IOC, VOC, SOC, Microbials
16	Landfill, Municipal, Closed. Is Transfer Station now.	3 YR	Database Search	IOC, VOC, SOC, Microbials
17-197	Mines	3 YR	Database Search	IOC, VOC, SOC, Microbials
	HWY 21	3 YR	GIS Map	IOC, VOC, SOC, Microbials
	Robie Creek Road	3 YR	GIS Map	IOC, VOC, SOC, Microbials
	All other roads	3 YR	GIS Map	IOC, VOC, SOC, Microbials

² TOT = time-of-travel (in years) for a potential contaminant to reach the wellhead

³ IOC = inorganic chemical, VOC = volatile organic chemical, SOC

UST = Underground Storage Tank, AST = Above Ground Storage Tank, WLAP Site = Waste Land Application Site, CERCLA Site = Comprehensive Environmental Response Compensation and Liability Act, NPDES Site = National Pollutant Discharge Elimination System, LUST = Leaking Underground Storage Tank

Section 3. Susceptibility Analyses

The surface intake's susceptibility to contamination was ranked as high, moderate, or low risk according to the following considerations: construction, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for the spring is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. Attachment A contains the susceptibility analysis worksheet. The following summaries describe the rationale for the susceptibility ranking.

Surface Intake Construction

Surface intake construction scores are determined by evaluating whether the surface intake has been constructed according to Idaho Code (IDAPA 58.01.08.05) and if the surface water is directly influenced by surface water. A public water system is considered to have less risk if it has been constructed with the proper materials. Any amount of soil, riverbed, or lakebed material between the source water and the intake may add some level of protection from potential contaminants. In addition, the location of the intake with respect to vulnerable areas of the source water body is deemed an important decision.

In this case, the surface intake rated moderate for construction. According to Monty Marchus of DEQ, the installed system is a state-of-the-art pall membrane filtration plant equipped with a coagulation addition to address any potential arsenic issues when ground water is used. Chlorination with extended contact time is performed before water is sent to the distribution system.

Potential Contaminant Source and Land Use

This rating derives from overall land use within the delineation, if sources of turbidity are present, and the number and proximity to the intake of potential contaminant sources.

In this case, the surface intake rated moderate for IOC's (i.e., nitrates, arsenic), VOC's (i.e., petroleum products), SOC's (i.e., pesticides), and microbial contaminants (i.e., bacteria). The delineated area is composed of predominantly forested land with very little agricultural activity. Much of the forest contains logging roads, which are considered sources of turbidity.

Within 500 feet of the surface intake, or within a 4 hour time of travel are two significant potential contaminant sources. Highway 21 and Robie Creek Road occasionally host a very high amount of vehicular traffic, especially during camping holidays, weekends, and fall hunting seasons. If an accident occurred on them, potential contaminants could enter into Mores Creek.

In addition to the sources located within the critical zone of the surface intake, within the delineated area 197 potential contaminant sources were identified within DEQ databases (Table 1). If a release occurred from the potential contaminant sites, IOC's, VOC's, SOC's, or microbial contaminants might contaminate the water destined for the drinking water system.

Final Susceptibility Ranking

A detection above a drinking water standard MCL in tested water or any detection of a VOC or SOC will automatically give a high susceptibility rating to a drinking water source, despite the land use of the area, because a pathway for contamination already exists. Additionally, potential contaminant sources within 500 feet of a surface intake (or 4 hours upstream) will automatically lead to a high susceptibility rating. Having high risk land use with the delineation also contributes greatly to the overall ranking. In this case, the Wilderness Ranch Owners Association Inc. surface intake rated automatically high susceptibility to all four categories of potential contaminants due to it's proximity to Robie Creek Road and Highway 21.

Table 2. Summary of Wilderness Ranch Owners Association Inc. Susceptibility Evaluation

Susceptibility Scores ¹									
Drinking Water Source	Potential Contaminant Inventory and Land Use				System Construction	Final Susceptibility Ranking			
	IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Surface Intake	M	M	M	M	M	H*	H*	H*	H*

¹H = High Susceptibility, M = Moderate Susceptibility, L = Low Susceptibility,

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

H* = Automatically high rating due to close proximity to Robie Creek Road and Highway 21

Susceptibility Summary

In terms of total susceptibility, the surface intake's potential to be subject to contamination rated automatically high for IOCs, VOCs, SOCs, and for microbial bacteria. System construction rated moderate and potential contaminant land use scores rated moderate for IOCs, VOCs, SOCs, and microbial bacteria. If not for the automatically high rating, the surface intake would have rated moderate for all four potential contaminant categories.

The system has been soundly engineered, constructed with state-of-the-art facilities, and sized to meet future needs. The scoring of this assessment is based heavily on the land use within the Mores Creek drainage system despite the system's ability to treat any contaminated water it may receive.

According to SDWIS, no SOCs, VOCs, or microbial bacteria have been detected in the wells' water. The IOCs sodium, fluoride, nitrate, beryllium, mercury, and arsenic have been detected in tested water. Concentrations of each IOC have been significantly below MCLs except for arsenic. Arsenic has been detected in concentrations between 4 ppb and 8 ppb, which is approaching the MCL of 10 ppb. In addition, the surface intake's delineation intersects a priority area for the IOC fluoride.

To address potential arsenic issues, a coagulation addition has been added to the pall membrane filtration plant, through which all water destined to the distribution system passes.

Section 4. Options for Drinking Water Protection

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources. If the system should need to expand in the future, new well or spring sites should be located in areas with as few potential sources of contamination as possible, and the site should be reserved and protected for this specific use.

An effective drinking water protection program is tailored to the particular local drinking water protection area. A community with a fully developed source water protection program will incorporate many strategies. For the Wilderness Ranch Owners Association Inc., drinking water protection activities should first focus on correcting any deficiencies outlined in the sanitary survey (an inspection conducted every five years with the purpose of determining the physical condition of a water system's components and its capacity). As land uses within most of the source water assessment areas are outside the direct jurisdiction of the Wilderness Ranch Owners Association Inc., collaboration and partnerships with state and local agencies and industry groups should be established and are critical to success. Educating water users and the public about source water will further assist the system in its monitoring and protection efforts

Due to the time involved with the movement of ground water, drinking water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. A strong public education program should be a primary focus of any drinking water protection plan. Public education topics could include household hazardous waste disposal methods and the importance of water conservation. There are multiple resources available to help communities implement protection programs, including the Drinking Water Academy of the EPA. Drinking

water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Franklin County Soil Conservation and Water District, and the Natural Resources Conservation Service.

A community must incorporate a variety of strategies in order to develop a comprehensive drinking water protection plan, be they regulatory in nature (e.g. zoning, permitting) or non-regulatory in nature (i.e. good housekeeping, public education, specific best management practices). For assistance in developing protection strategies please contact the Boise Regional Office of the DEQ or the Idaho Rural Water Association.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Boise Regional DEQ Office (208) 373-0550

State DEQ Office (208) 373-0502

Website: <http://www.deq.state.id.us>

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper (mharper@idahoruralwater.com), Idaho Rural Water Association, at (208) 343-7001 for assistance with drinking water protection (formerly wellhead protection) strategies.

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLA – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RCRA – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

WLAP (Wastewater Land Applications Sites) – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

References Cited

IDAPA 58.01.08, Idaho Rules for Public Drinking Water Systems, Section 005.

Idaho Department of Environmental Quality. 2000. Source Water Assessment Program Public Water System Questionnaire.

Idaho Division of Environmental Quality Ground Water Program, October 1999. Idaho Source Water Assessment Plan.

Marchus, Monty. Personal communication with Richard Lee (2/28/2005).

Attachment A

Wilderness Ranch Owners Association Inc.

Susceptibility Analysis Worksheet

Susceptibility Analysis Formulas

Formula for Spring Sources

The final spring scores for the susceptibility analysis were determined using the following formulas:

1. VOC/SOC/IOC/ Final Score = (Potential Contaminant/Land Use X 0.818) + System Construction
2. Microbial Final Score = (Potential Contaminant/Land Use X 0.375) + System Construction

Final Susceptibility Scoring:

- 0 - 3 Low Susceptibility
- 4 – 8 Moderate Susceptibility
- ≥ 8 High Susceptibility

1. System Construction		SCORE			
Intake structure properly constructed	YES	0			
Infiltration gallery or well under the direct influence of Surface Water	YES	2			
Total System Construction Score		2			
2. Potential Contaminant Source / Land Use		IOC Score	VOC Score	SOC Score	Microbial Score
Predominant land use type (land use or cover)	BASALT FLOW, UNDEVELOPED, OTHER	0	0	0	0
Farm chemical use high	NO	0	0	0	
Significant contaminant sources within 500 feet of Intake or within 4 hour time of travel	YES	number	2	2	2
		points (8max)	4	4	4
Agricultural lands within 500 feet	NO	0	0	0	0
Three or more contaminant sources	YES	1	1	1	1
Sources of turbidity in the watershed	YES	1	1	1	1
Total Potential Contaminant Source / Land Use Score		6	6	6	6
3. Final Susceptibility Source Score		8 (M)	8 (M)	8 (M)	8 (M)
4. Final Source Ranking		High*	High*	High*	High*
<ul style="list-style-type: none"> Automatically high rating received due to potential contaminant sources Existing within 500 feet of source and within 4 hour time of travel 					